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CHAMPVA POLICY MANUAL

CHAPTER: 2
SECTION: 25.1
TITLE: RESPIRATORY SYSTEM

AUTHORITY: 38 CFR 17.272(a) and 17.272(a)

RELATED AUTHORITY: 32 CFR 199.4(c)(2)

I. EFFECTIVE DATE

A. August 26, 1985.

B. August 20, 2003, for LVRS (Lung Volume Reduction Surgery).

II. PROCEDURE CODE(S)

A. CPT Codes: 30000-32999, 43200-43288, 43231-43232,96570-96571

B. HCPCS Level II Codes: G0302-G0305

III. DESCRIPTION

A. The respiratory system is the tubular and cavernous organs and structures by means of which pulmonary ventilation and gas exchange between ambient air and the blood are brought about.

B. LVRS (Lung Volume Reduction Surgery) also referred to, as reduction pneumoplasty, lung shaving or lung contouring, is a palliative surgical procedure for late-stage emphysema. Surgeons remove a large volume (approximately 20% to 30%) of tissue from one or both lungs simultaneously or sequentially. This reduces the volume of the chest cavity occupied by the lungs, enabling the patient to ventilate the remaining lung tissue more effectively. The surgery can be performed either by VATS (Video-Assisted Thorascopic Surgery) or by open incision (median sternotomy), and the lung volume can be reduced by using a stapler.

IV. POLICY

Medically necessary services and supplies required in the diagnosis and treatment of illness or injury involving the respiratory system are covered.

V. POLICY CONSIDERATIONS

A. Laryngoscopy.

1. Laryngoscopy and related procedures (CPT codes 31515-31599) are covered. When a laryngoscopy is performed in conjunction with a bronchoscopy (CPT codes 31622-31656) during the same surgical session, reimbursement will be in accordance with the multiple surgery policy as stated in Chapter 3, Section 7.1, ASC (*Ambulatory Surgical Center) Reimbursement*.

2. Indirect laryngoscopy (CPT 31505) when billed as an independent procedure is reimbursed on the same basis as an office visit, limited, or established patient. When billed in conjunction with an office visit, reimbursement for the indirect laryngoscopy is included in the reimbursement for the office visit.

B. Bronchoscopy.

Bronchoscopy (CPT codes 31622-31656) is a covered service and reimbursement is the same regardless of the type of instrument used (flexible or rigid bronchoscope). When a bronchoscopy is performed in conjunction with an esophagoscopy (CPT codes 43200-43228) or a tracheostomy (CPT codes 31600-31614), or (CPT codes 43231-43232) reimbursement will be in accordance with the multiple surgery policy as stated in Chapter 3, Section 7.1, ASC (*Ambulatory Surgical Center) Reimbursement*.

C. Bronchoscopy Lobectomy. When a bronchoscopy (CPT codes 31622-31656) is performed in conjunction with a lobectomy (CPT codes 32320, 32480-32488), the bronchoscopy will be paid at 50% of its usual allowance. If performed at the completion of the lobectomy for bronchial toilet, no additional fee will be allowed.

D. Bronchial Brushing. The bronchial brushing technique (CPT code 31622-31623) to obtain cytologic specimens from the bronchial tree is covered. Reimbursement is included in the allowance for the bronchoscopy.

E. Transbronchial Lung Biopsy. A transbronchial lung biopsy (CPT code 31628) is a covered service. When performed in conjunction with other surgery, multiple surgery guidelines will apply.

F. Bronchopulmonary Lavage. Bronchopulmonary lavage, complete (CPT code 32997) or segmental, is a covered service when performed in conjunction with other surgery, multiple surgery guidelines will apply.

G. Thoracotomy/Thoracic Surgical Procedures. When a thoracotomy (CPT codes 32095-32160) is billed in conjunction with another major thoracic (chest) procedure, payment will be made only for the procedure with the highest value.

H. Resection of pneumatoceles is a covered procedure.

I. LVRS (Lung Volume Reduction Surgery) for patients who are non high-risk and present with severe, upper-lobe emphysema; or non-high risk and present with severe, non upper-lobe emphysema with low exercise capacity. The patient must meet the following criteria:

1. Patient has emphysema and has not smoked for more than 4-months

2. Patient has HRCT (High Resolution Computer Tomography) scan evidence of bilateral emphysema

3. Patient has cardiac ejection fraction less than 45%

4. No history of congestive heart failure/myocardial infarction in last 6-months

5. Pre-op work up shows FEV_1 (Forced Expiratory Volume) in 1-second, max of pre and post bronchodilator value less than or equal to 45% of predicted, if age 70 or older, FEV_1 15% of predicted or more

6. Postbronchodilator total lung capacity greater than or equal to 100% of predicted value and residual volume greater than or equal to 150% of predicted value

7. Resting partial PaO_2 (Pressure of Oxygen) 45-mm Hg or greater, or 30-mm Hg if 1-mile above sea level

8. Resting partial $PaCO_2$ (Pressure of Carbon Dioxide) less than or equal to 60-mm Hg on room air, and CT scan evidence of bilateral emphysema, or 55-mm Hg if above sea level

9. Plasma cotinine less than or equal to 13.7-ng/ml (if not using nicotine products) or carboxyhemoglobin less than or equal to 2.5% (if using nicotine products)

10. Six-minute walk test greater than 140-meters

11. BMI, = 31.1 Kg/m2 (men) or 32.3 Kg/m2 (women)

J. LVRS is limited to bilateral excision of a damaged lung with stapling performed via median sternotomy or video-assisted thorascopic surgery.

K. LVRS must be preceded and followed by a program of diagnostic and therapeutic services consistent with those provided in the NETT (National Emphysema Treatment Trial) and designed to maximize the patient's potential to successfully undergo and recover from surgery. The program must include a 6-to 10-week series of at least 16, and no more than 20-preoperative sessions, each lasting a minimum of 2-hours. It must also include at least 6 and no more than 10-postoperative sessions, each lasting a minimum of 2-hours, within 8-to 9-weeks of the LVRS.

L. LVRS must be performed at facilities that were identified by the NHLBI (National Heart, Lung and Blood Institute) to meet the threshold for participation in the NETT or at sites that have been approved by Medicare or TRICARE as lung transplant facilities.

NOTE: The CMS (Center for Medicare Services) is developing accreditation standards for facilities to perform LVRS. When LVRS facility accreditation standards are completed and implemented, LVRS will only be covered at accredited facilities.

VI. EXCLUSIONS

Lung volume reduction surgery is not covered for patients with any of the following indications:

1. Patient characteristics that carry a high risk for perioperative morbidity and/or mortality.

2. The disease is unsuitable for LVRS.

3. The patient presents with post-bronchodilator FEV_1 20% or less of predicted value and patient has either:

   a. Homogeneous distribution of emphysema on CT scan, or

   b. Carbon monoxide diffusing capacity (DL_{CO}) of 20% or less of predicted value.

4. A patient with predominantly non-upper lobe emphysema and who has a high exercise capacity but who meets all other criteria outlined in policy.

   a. High exercise capacity is defined as a maximal workload at the completion of the pre-operative diagnostic and therapeutic program that is above 25-W for women and 40-W for men (under the measurement conditions for cycle ergometry with an increment of 5-or 10-W per minute after three minutes of pedaling with the ergometer set at 0-W and the person breathing 30% oxygen).

   b. Predominantly nonupper lobe predominance of emphysema is defined to exclude disease on CT that is judged by the radiologist as affecting primarily the upper lobes of the lung, and to include disease that is judged to be predominantly lower lobe, diffuse, or predominantly affecting the superior segments of the lower lobes.

5. The following are exclusion criteria for potential LVRS patients:

   a. Previous LVRS

   b. Pleural or interstitial disease which precludes surgery

c. Giant bulla (greater than 1/3 the volume of the lung in which the bulla is located)

d. Clinically significant bronchiectasis

e. Pulmonary nodule requiring surgery

f. Previous lobectomy

g. Uncontrolled hypertension (systolic greater than 200-mm Hg or diastolic greater than 100-mm Hg)

h. Oxygen requirement greater than 6-liters per minute during resting to keep oxygen saturation greater than or equal to 90%

i. History of recurrent infections with clinically significant production of sputum

j. Unplanned weight loss greater than 10% within 3-months prior to consideration for surgery

k. Pulmonary hypertension, defined as mean pulmonary artery pressure of 33-mm Hg or greater on right-heart catheterization or peak systolic pulmonary artery pressure of 44-mm Hg or greater

l. Resting bradycardia (less than 50-beats per minute), frequent multifocal PVCs (Premature Ventricular Contractions) of complex ventricular arrhythmia or sustained SVT (Superventricular Tachycardia).

m. Evidence of systemic disease or neoplasia that is expected to compromise survival

6. Thoracopic laser bullectomy.

END OF POLICY*